

FIG. 1  
VUV SPECTRA OF STANDARD UV EXCIMER GRADE SILICA (GLASS A),  
DRY FUSED SILICA (GLASS B) AND DRY FUSED SILICA CONTAINING 0.8 wt.% F (GLASS C).

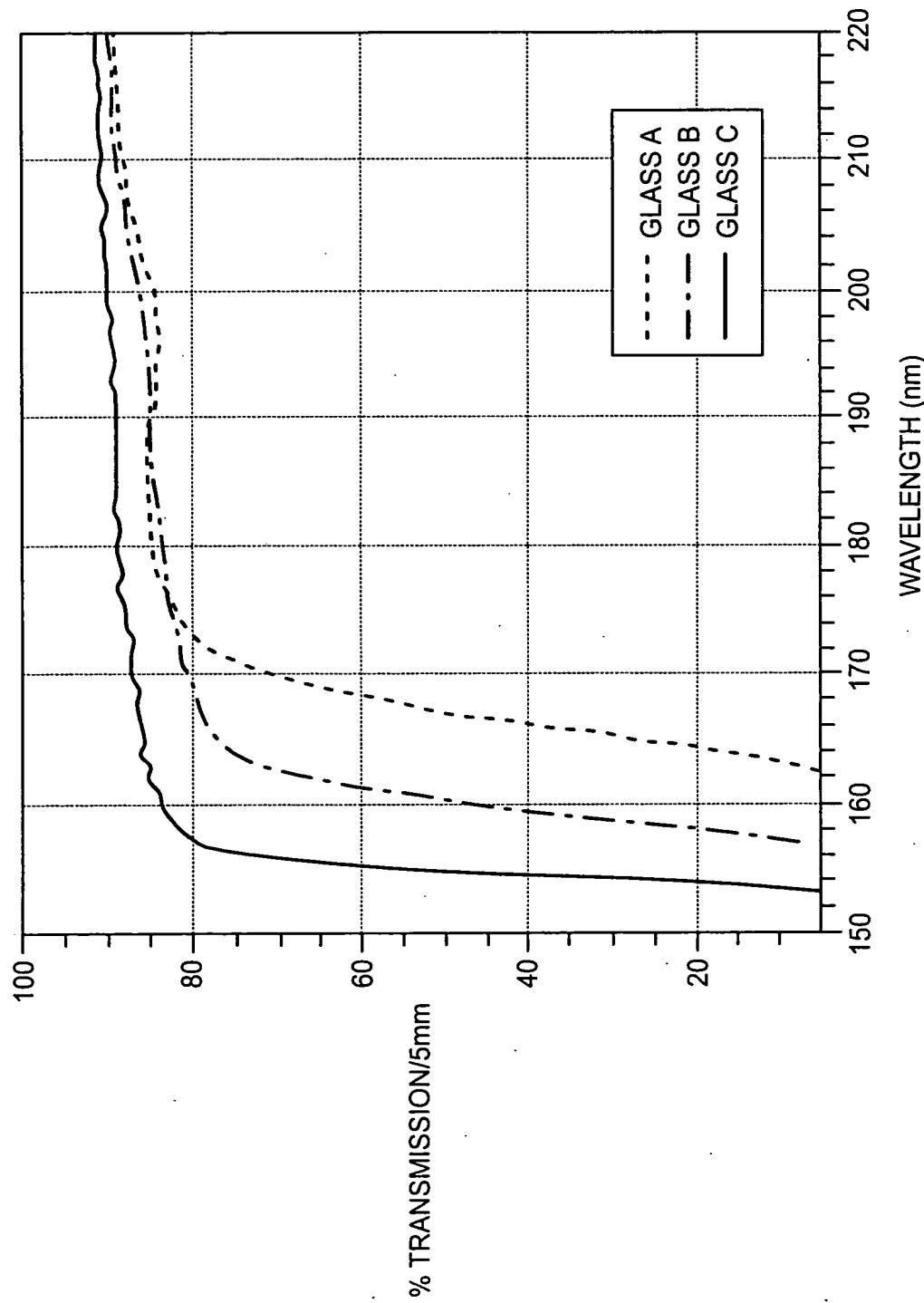


FIG. 2 OPTICAL DENSITY AS A FUNCTION OF SAMPLE THICKNESS FOR GLASS C.

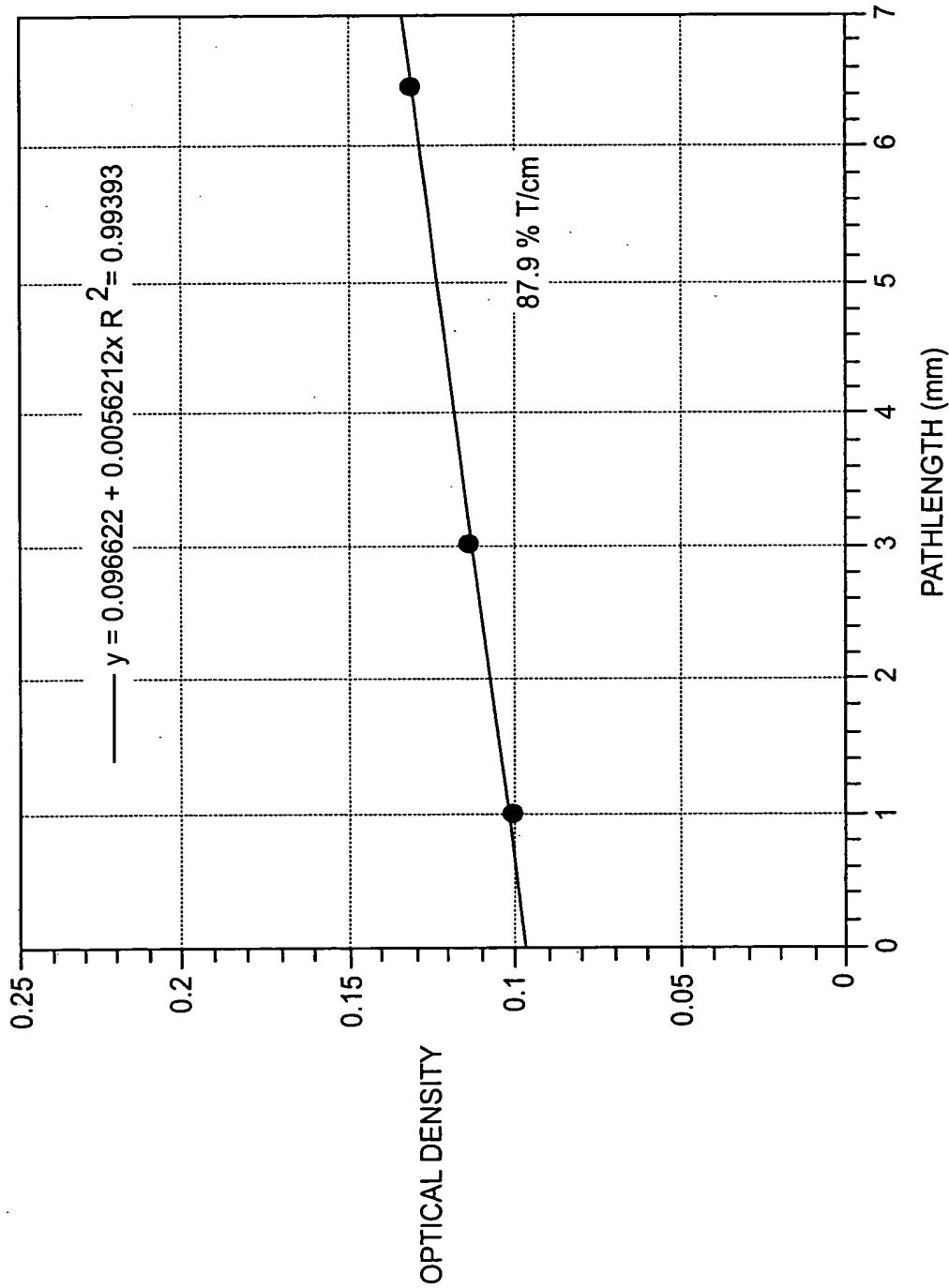


FIG. 3

ABSORPTION SPECTRA TAKEN BEFORE AND AFTER EXPOSURE TO  $F_2$  LASER  
RADIATION COMPARING DRY SILICA WITHOUT F (GLASS B) AND A 0.2 wt.% F-DOPED,  
DRY SILICA (GLASS D). DATA IS FOR 1.1 mm THICK SAMPLES.

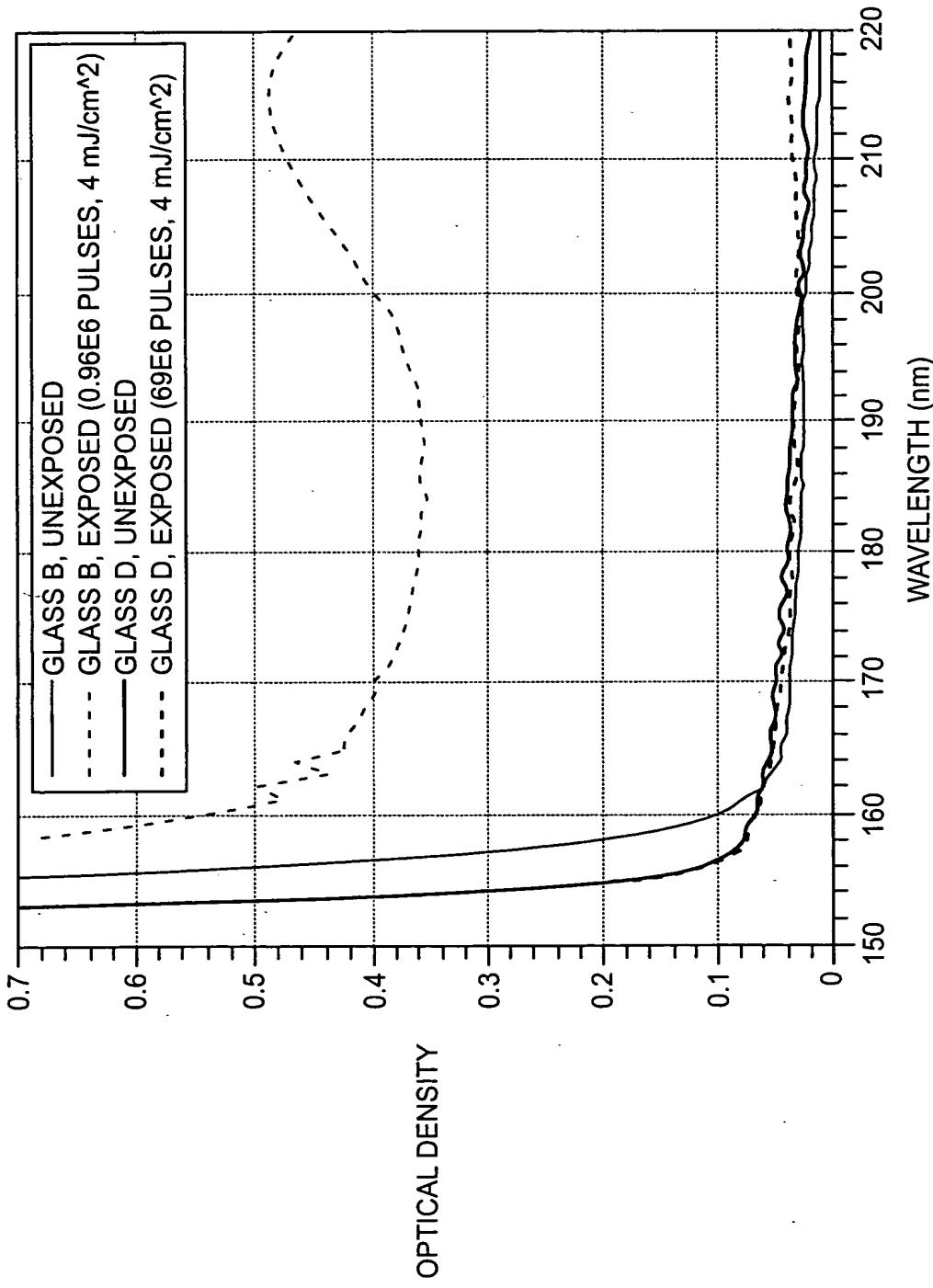


FIG. 4 REFRACTIVE INDEX AS A FUNCTION OF WAVELENGTH FOR GLASS E (0.8 wt. % F)  
SHOWING 3-TERM SELLMEIER FIT AND EXTRAPOLATION TO 157-nm.

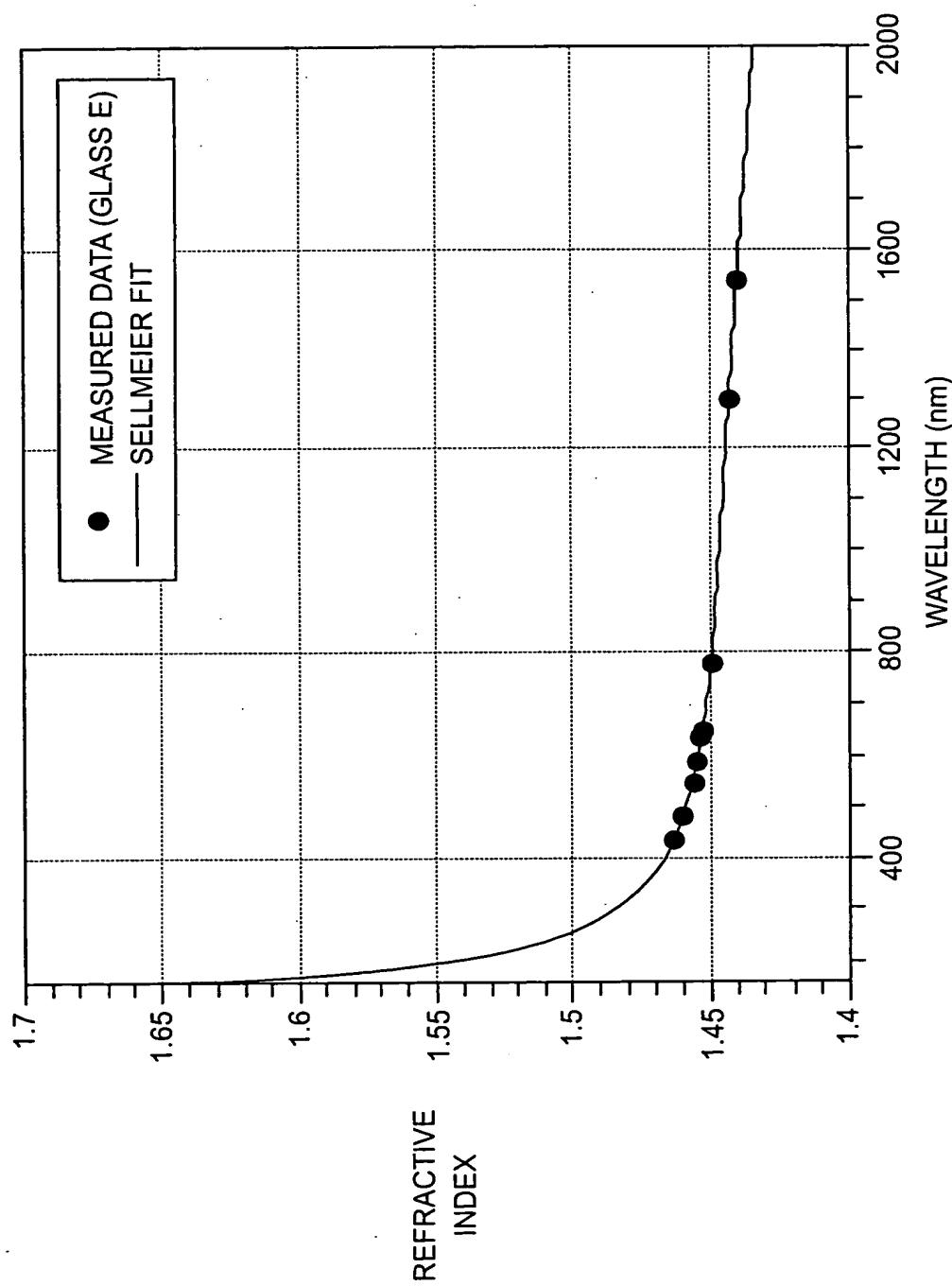


FIG. 5 435.8-nm REFRACTIVE INDEX (MEASURED) AS A FUNCTION OF FLUORINE CONTENT.

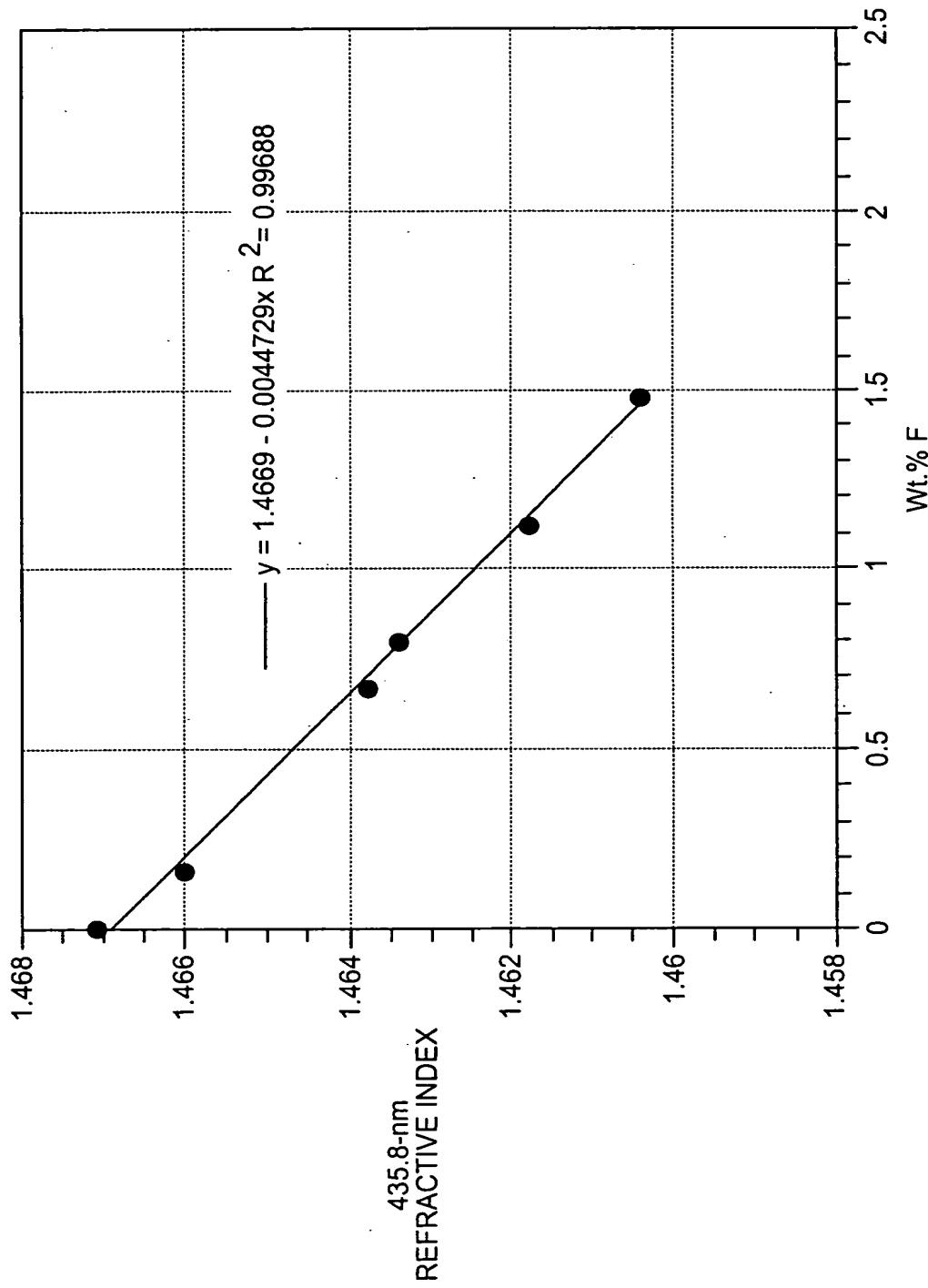


FIG. 6 157-nm REFRACTIVE INDEX (CALCULATED FROM SELLMEIER FIT)  
AS A FUNCTION OF FLUORINE CONTENT.

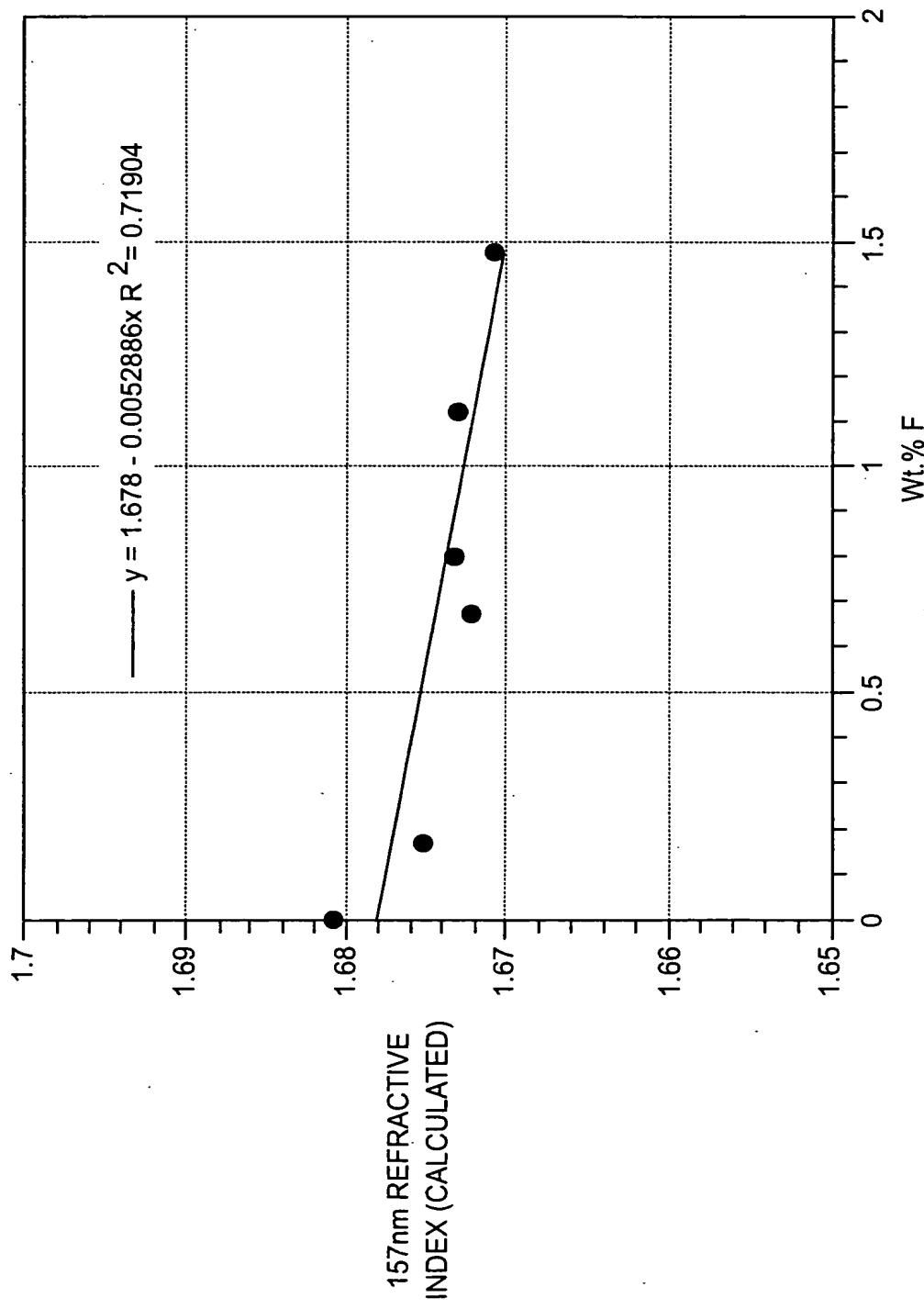


FIG. 7 COEFFICIENT OF THERMAL EXPANSION AS A FUNCTION OF FLUORINE LEVEL.

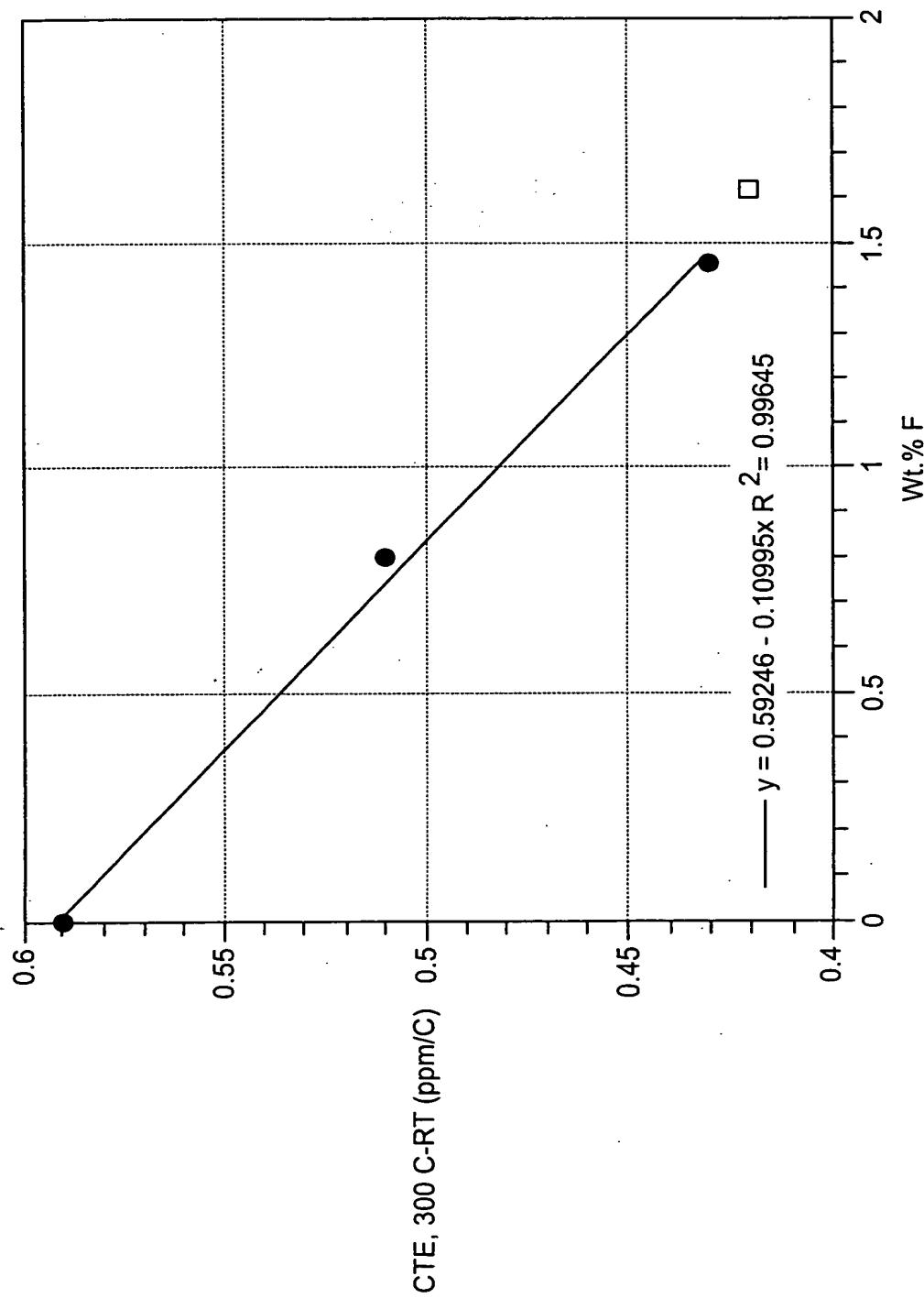


FIG. 8

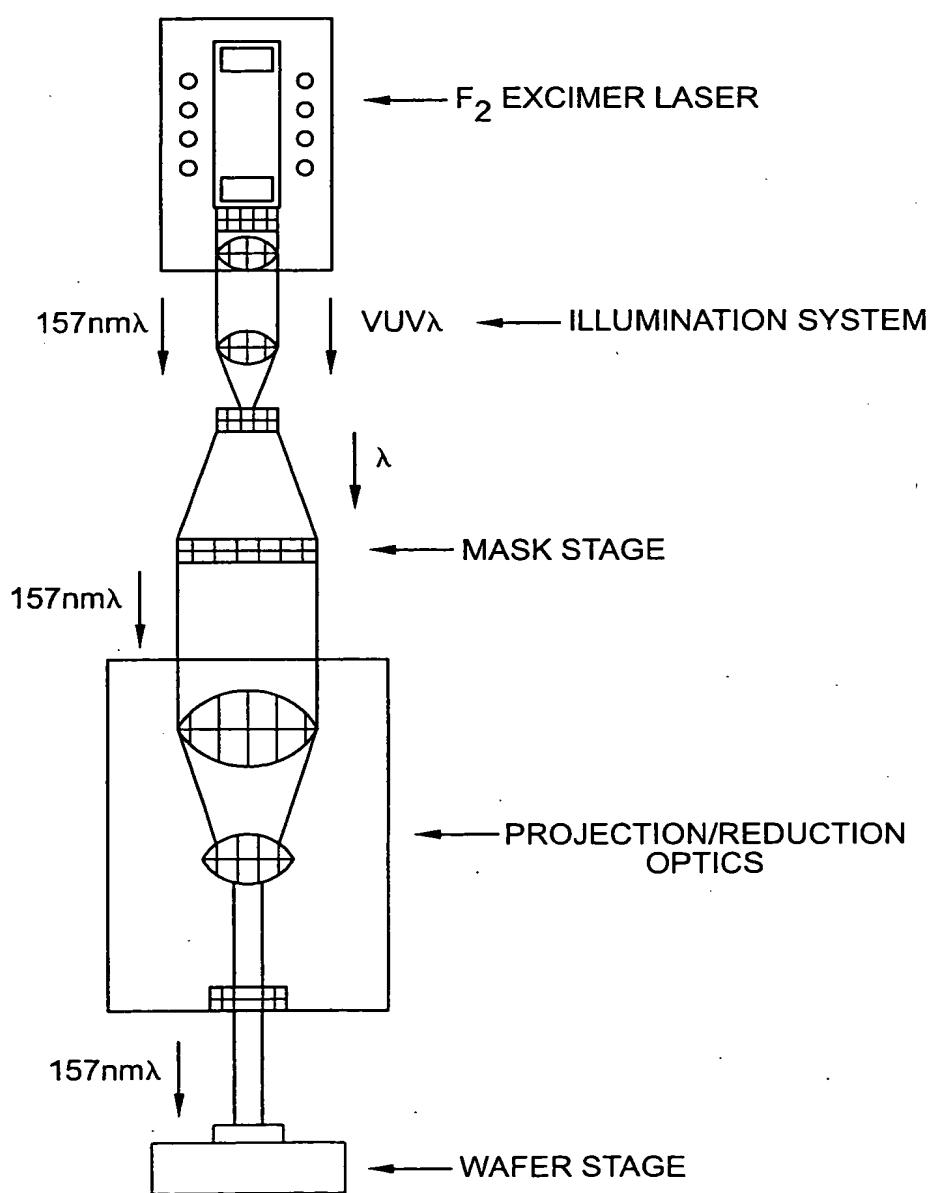


FIG. 9

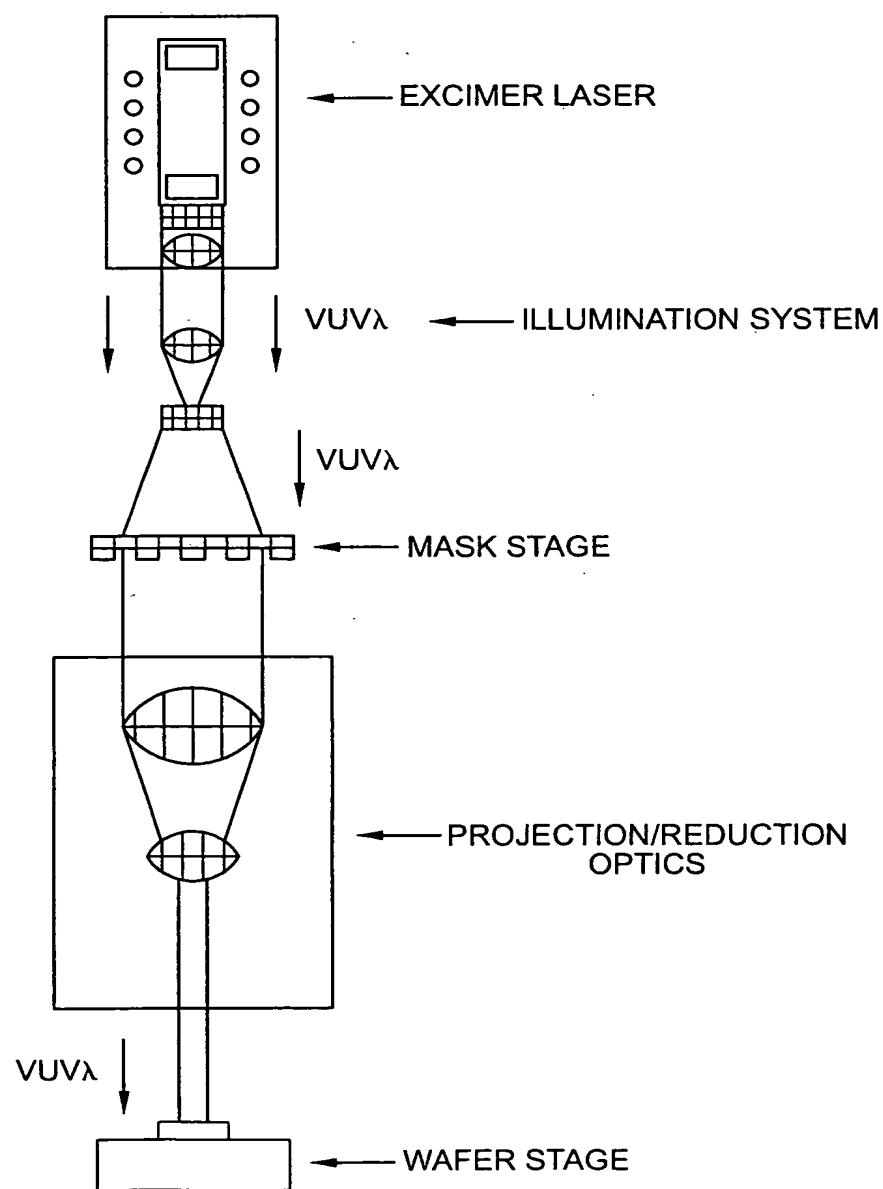
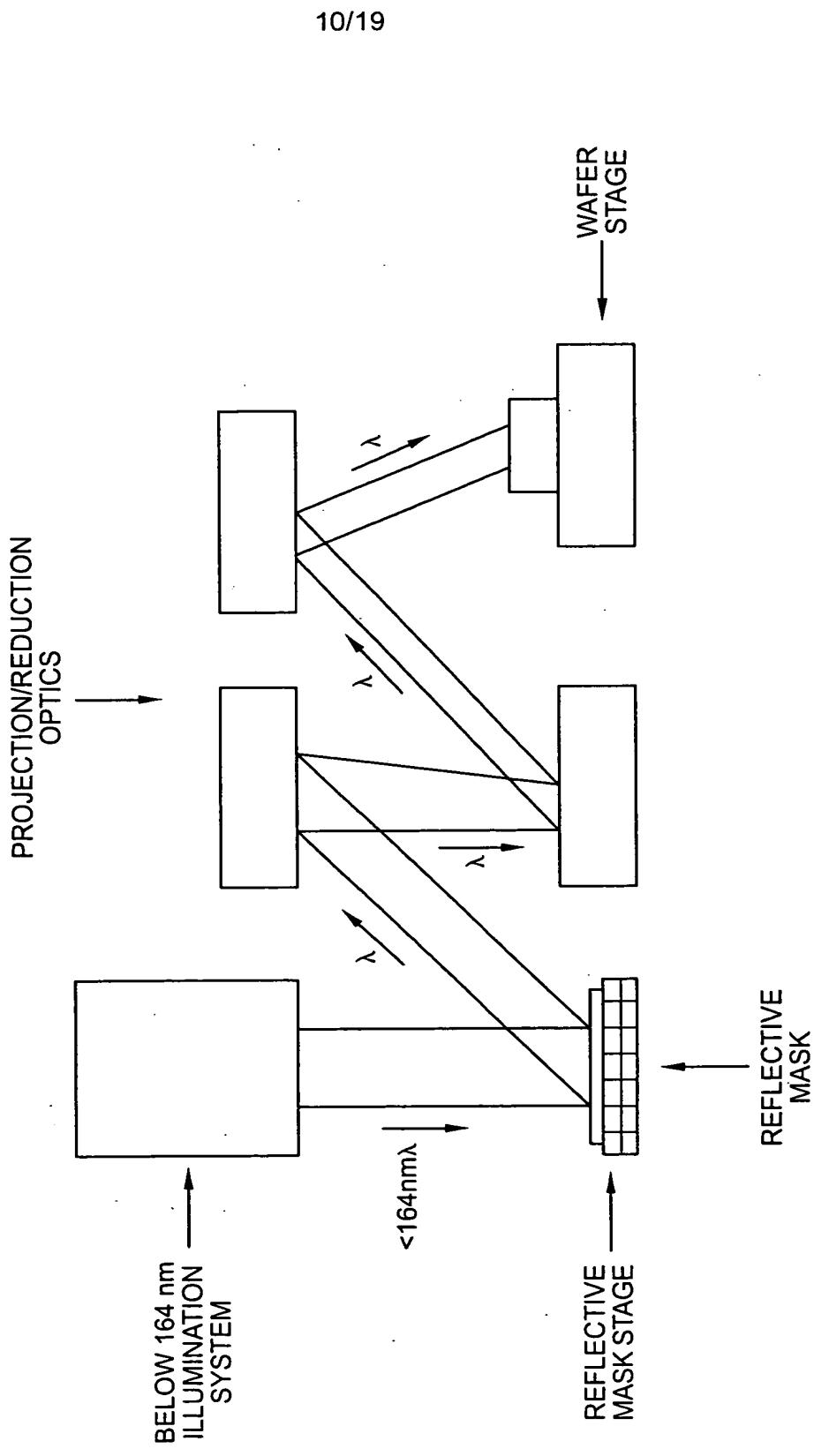


FIG. 10



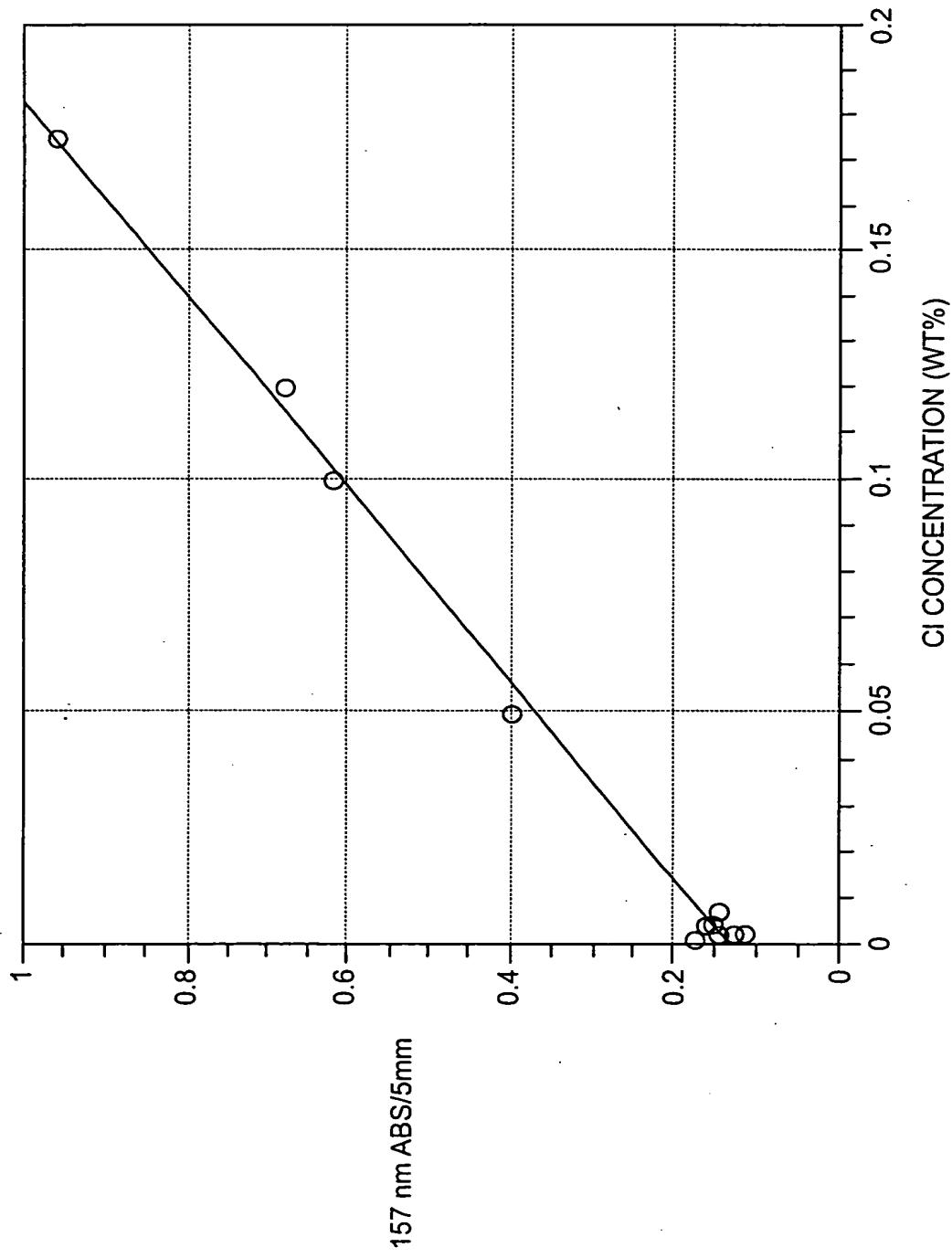


FIG. 12 F<sub>2</sub> EXCIMER LASER (2 mJ/cm<sup>2</sup>-PULSE)

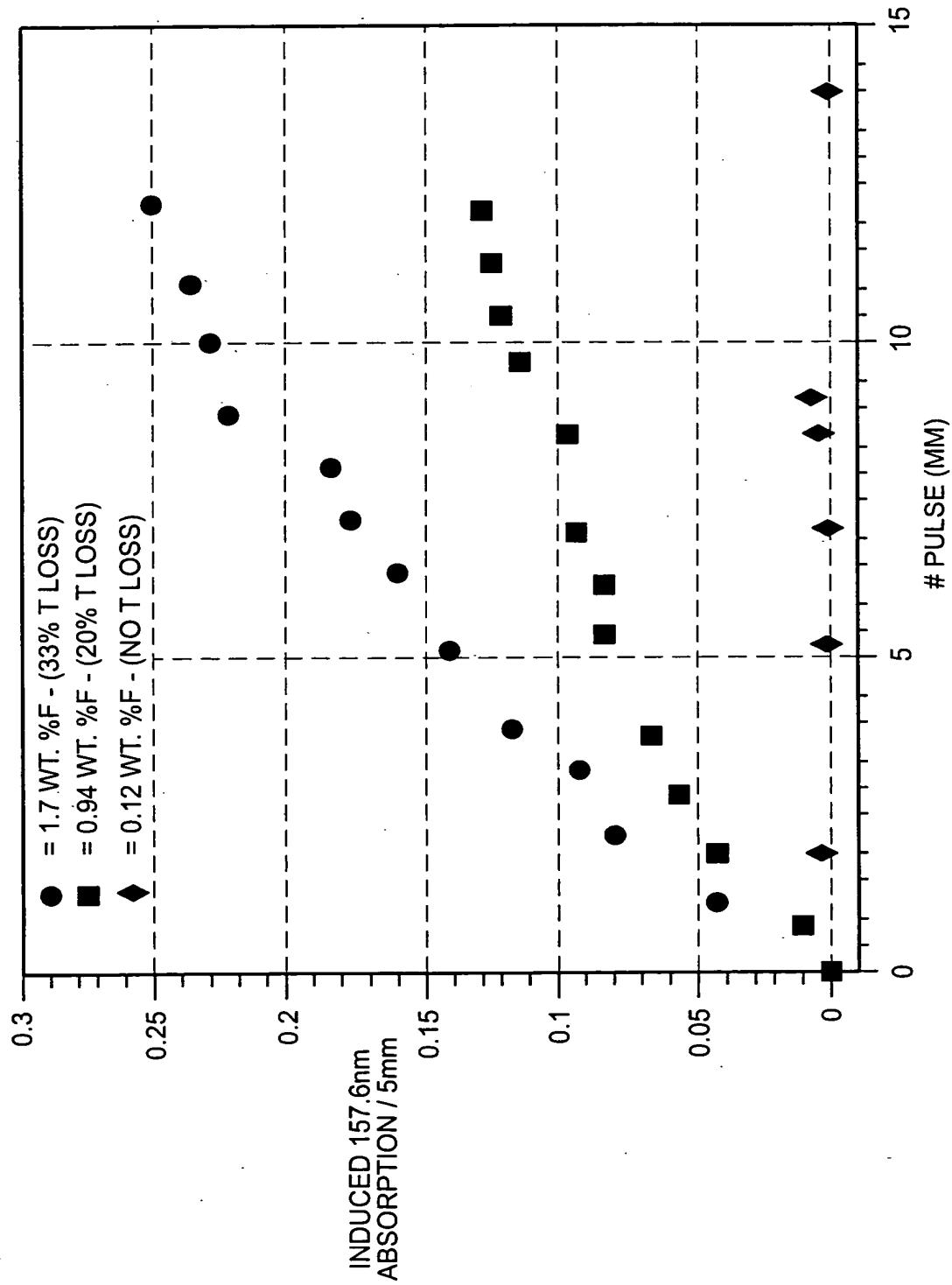


FIG. 13A High Fluorine, F<sub>2</sub> Laser 2 mJ/cm<sup>2</sup>-pulse

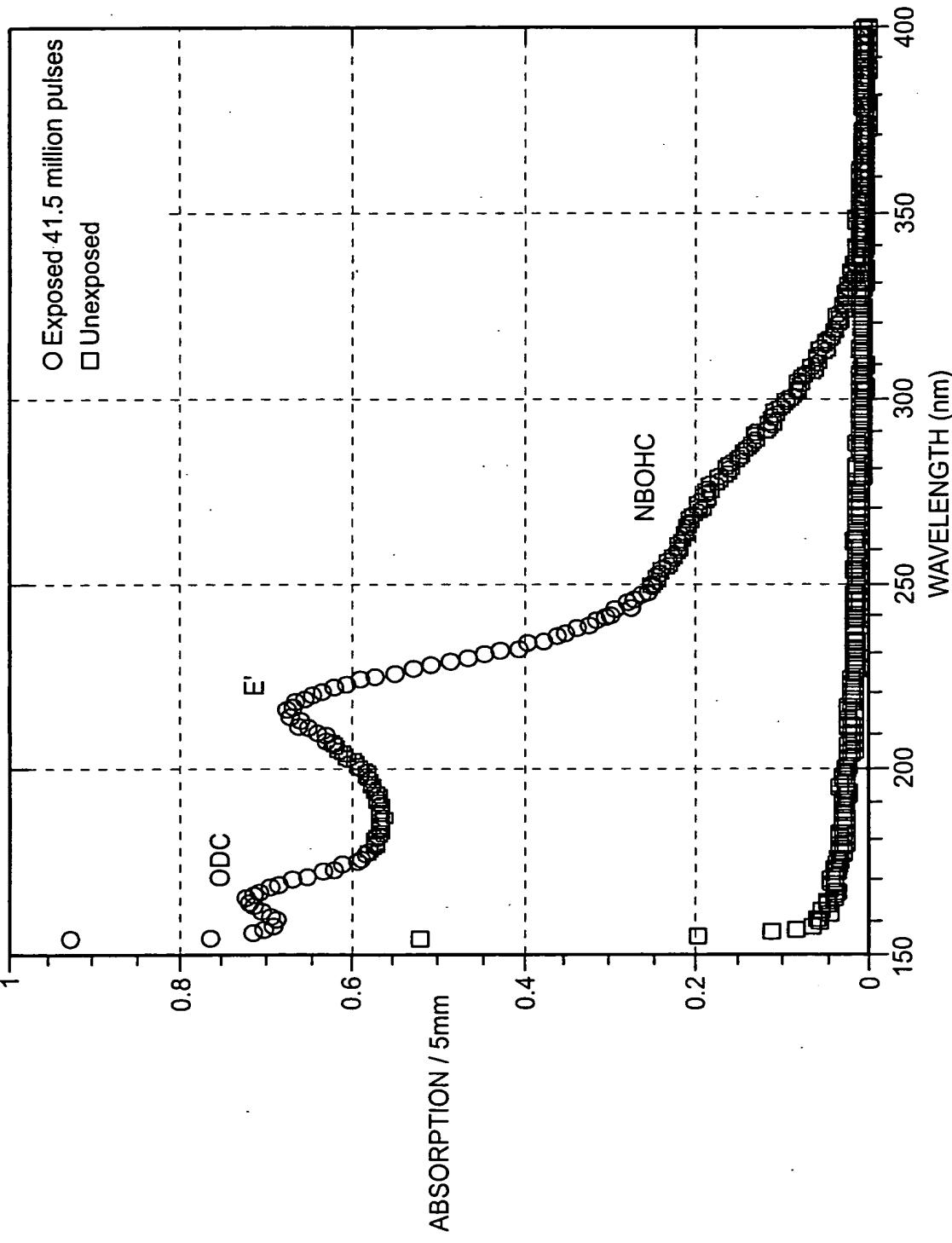


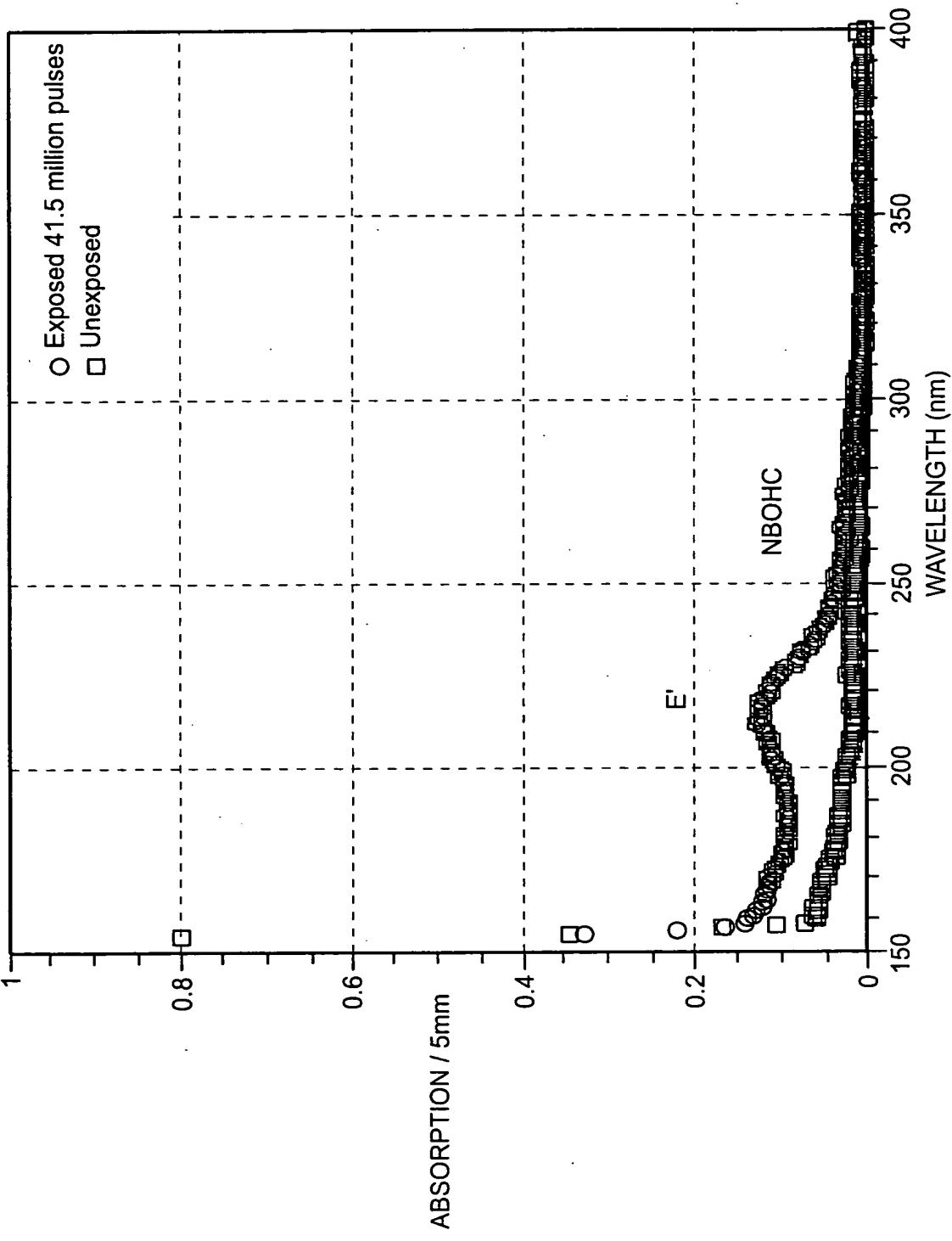
FIG. 13B Low Fluorine, F<sub>2</sub> Laser:2mJ/cm<sup>2</sup>-pulse

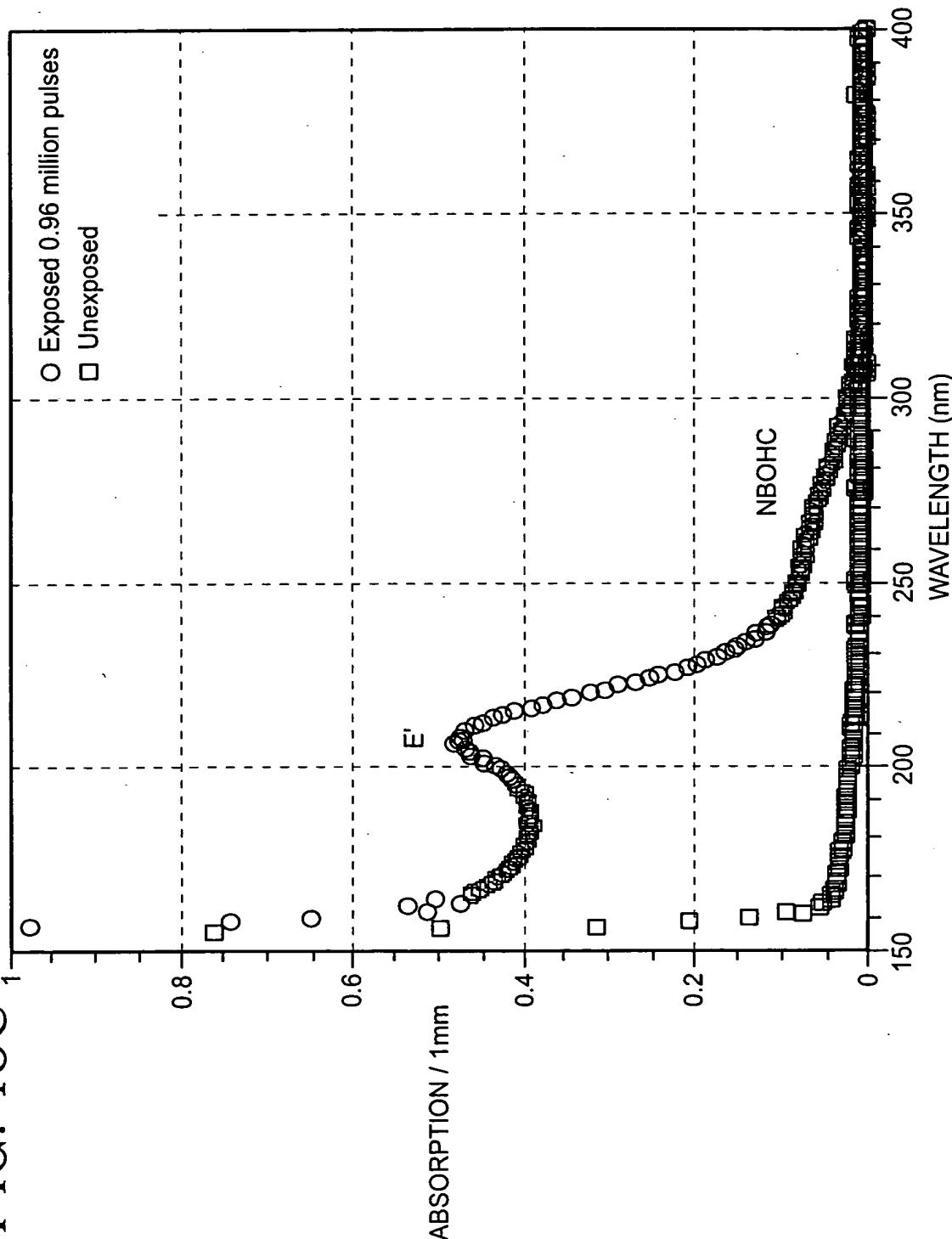
FIG. 13C DRY, No Fluorine,  $F_2$  Laser 4.5mJ/cm<sup>2</sup>-pulse

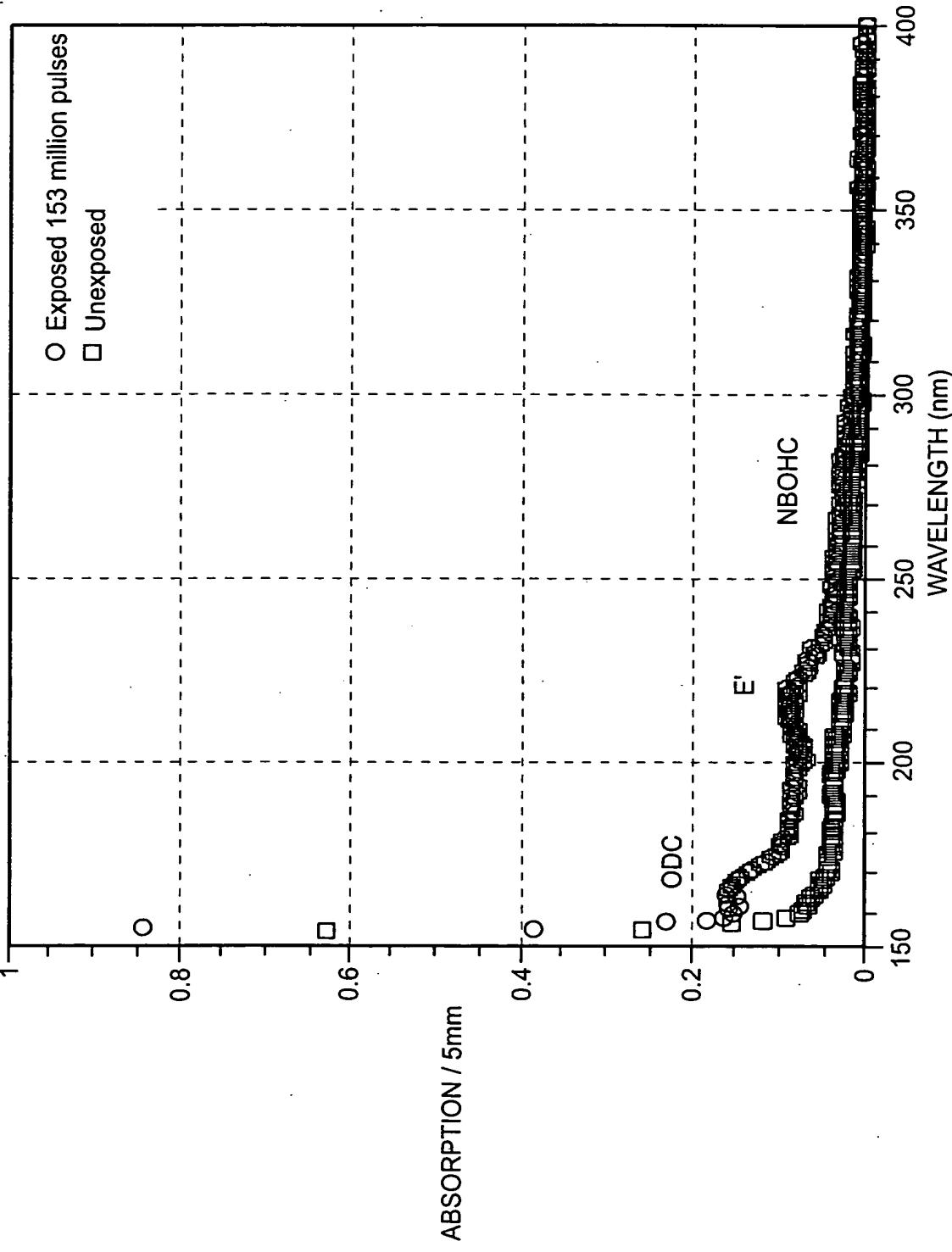
FIG. 14A High Fluorine,ArF Laser: 9 mJ/cm<sup>2</sup>-pulse

FIG. 14B Low Fluorine, ArF Laser: 9 mJ/cm<sup>2</sup>-pulse

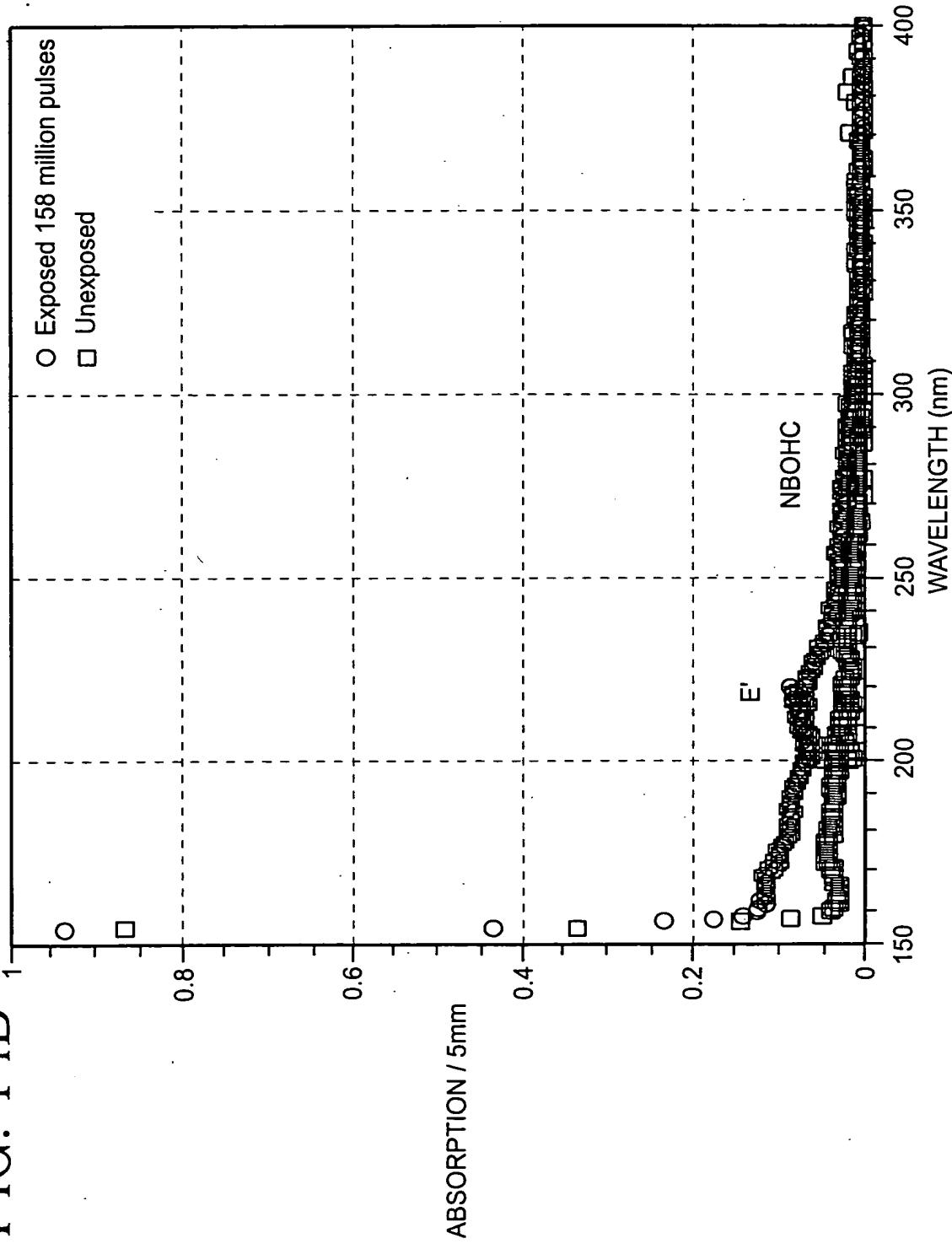


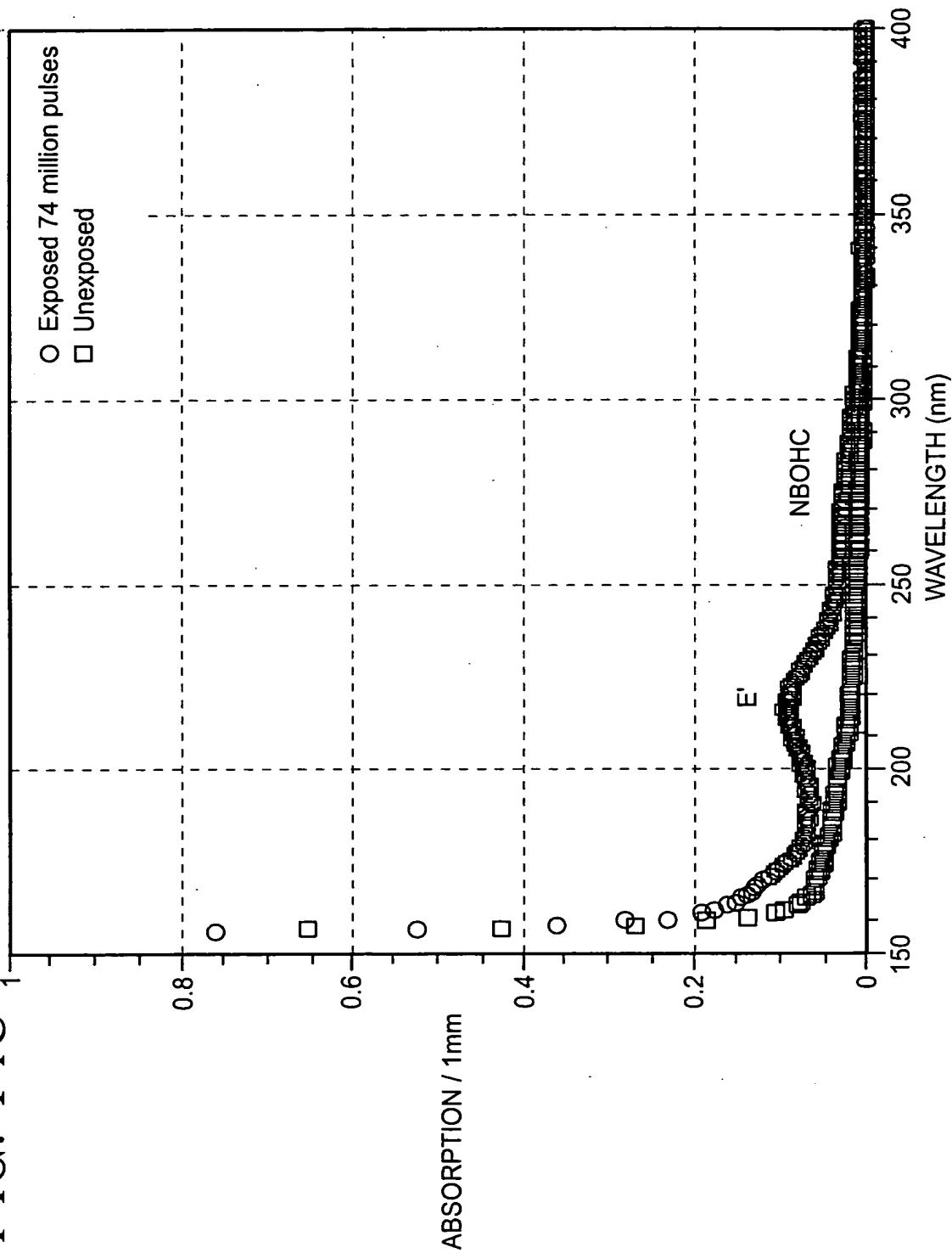
FIG. 14C <sup>DRY, No Fluorine, ArF Laser: 25 mJ/cm<sup>2</sup>-pulse</sup>

FIG. 15 157.6 nm On-Line Transmission Comparison

